

The ALS status screen gives information about the storage ring and is the place to look for updates when it is not working properly. It is a good idea to look at it from time to time to make sure you don't miss something, (e.g. attempt to take data when the beam is off).

When under normal user operations, the ALS status screen will look something like the image below. The green background signifies that light is available for users. The top header with the blue background is the message board. Unless there is a problem, it will usually say what type of mode the storage ring is running in (User Operations Shift), specific information about the [mode](#) (1.9 GeV, 276 buckets, cam bucket 318), and when the refills are (9:00 am, 5:00 pm, and 1:00 am). If there is a problem with the storage ring, updates will be placed in this section.

Directly below the top header on the left hand side, is a listing of the storage ring current in mA and a 12 hour history plot of the storage ring current. Under normal operations, the storage ring is refilled up to 400 mA and will decay to around 200 mA over 8 hours. The intensity of the synchrotron light is roughly proportional to the current, something to keep in mind when doing long maps.

To the right of the history plot is a gray box with some more numbers. The storage ring energy in GeV and the storage ring lifetime in hours are listed at the top of the gray box in blue rectangles. In a user operations shift, the storage ring energy will not deviate from 1.9 GeV. The lifetime, however, changes with the current in the ring: more current corresponds to a shorter lifetime. Typically, the lifetime will start out around 7.5 hours at 400 mA and increase to about 13 hours at 200 mA. The numbers below the energy and lifetime are parameters for different insertion devices around the storage ring. Sector 1 does not have an insertion device, and as a consequence, these numbers are generally not relevant to Beamline 1.4.

If there was a loss of beam (i.e. something went wrong) in the past 12 hour history, the cause will be listed in the footer. Typical faults include water trips and hutch faults and can take from 20 minutes to several hours to fix.

If there is a loss of beam, the status screen will change from a green background to a red background (see below) and will state that shutters are closed (indicating light is not available). The blue message board at the top of the screen should give an approximate time of when light will be available to users. This screen will also appear during the refills at 9:00 am, 5:00 pm, and 1:00 am. The infrared beamlines are unique at the ALS in that they do not have shutters. Thus, even though the screen may say that shutters are closed, if the storage ring has electrons in it (i.e. there is a current), then our instruments will still see light. We do not recommend taking data during refills or at anytime when the shutters are closed because the signal to noise is degraded, especially when the beam is being refilled.